

**RESEARCH ARTICLE :**

Constraints in adoption of mobile agro advisories by the farmers

■ D. PRABHA AND R. ARUNACHALAM**ARTICLE CHRONICLE :****Received :**

19.07.2017;

Accepted :

03.08.2017

SUMMARY : Agriculture is a back bone of Indian economy. Indian agricultural growth is hindered by low productivity, shrinking agricultural land base, urbanization, diversification in production and consumption bases, poor market linkages and other factors. Extensive use of modern information technologies need to be promoted at farm level for the transfer of technologies in a cost effective manner. Now-a-days mobile phone is an emerging tool to solve current problem in agriculture. Mobile agro advisory services on pest and disease management, nutrient management, intercultural operations, irrigation management, harvesting practices, weather information, market price information attracts huge volume of agriculturists. Even then farmers take a lot of constraints in the adoption of the recommended mobile advisories. Hence a study was conducted in Coimbatore district of Tamil Nadu with a sample of 200 farmers subscribing the SMS based agro advisories. The study revealed that most of the respondents (84.50 %) stated that they have not received any information pertinent to local crops, followed by about seventy per cent (71.00 %) have expressed their concern over the non receipt of messages on agricultural loans and government subsidies and about half of the respondents (52.50 %) stated that there were no messages related with soil and water testing. Most of the farmers (79.00 %) suggested to send the messages in local languages, a majority of the respondents (65.50 %) suggested to increase the frequency of the SMS advisories and about little less than half of the respondents (46.50 %) suggested to include picture and voice advisories.

KEY WORDS :Mobile agro advisory,
Constraints,
Suggestions

How to cite this article : Prabha, D. and Arunachalam, R. (2017). Constraints in adoption of mobile agro advisories by the farmers. *Agric. Update*, 12(TECHSEAR-7) : 1782-1785; DOI: 10.15740/HAS/AU/12.TECHSEAR(7)2017/1782-1785.

BACKGROUND AND OBJECTIVES

Mobile phones are being widely used for agricultural development not only India and it is also seen in South Asian and African countries. Many studies have been conducted all over the world related to mobile agro advisory services. Many studies assessed the impact of the mobile agro advisory services. There were few studies on the constraints

experienced by the farmers availing mobile agro advisory services. Bhavnani *et al.* (2008) pointed out that despite the increasing demand for the relevant and timely agricultural information in rural areas, there remains a digital divide that has prevented the percolation of benefits to the poor. The main beneficiaries of the ICT revolution have been population segments with and in areas where infrastructure is developed; the poor and those

Author for correspondence :**R. ARUNACHALAM**Department of
Agricultural Extension,
Tamil Nadu Agricultural
University, COIMBATORE
(T.N.) INDIA
Email : dr.r.arunachalam
@ gmail.comSee end of the article for
authors' affiliations

living in distant areas have been excluded. Mobile phones can act as a remedy because of its wide reach and low cost of delivering information. It also enjoys the advantage of greater flexibility since it enables information dissemination through both voice and text messages. Another constraint on the greater use of ICT in agriculture is the scattered nature of ICT initiatives. This leads to low adoption and usage of support tools developed for small-scale agriculture because extension services do not reach the targeted population in time (Munyua, 2007). This was documented in the context of Africa, but is also true for India.

Tamil Nadu is a prime state in India witnessed huge volume of subscribers of mobile agro services from public advisories and also private advisories. Public mobile advisory system in the biggest service provider in Tamil Nadu where the Tamil Nadu Agricultural University and the state department of agriculture are two big monsters providing advisories to the farmers through SMS.

The main objective of the present study is to study constraints in the adoption of mobile agro advisory services in Tamil Nadu and also to offer suitable suggestions.

RESOURCES AND METHODS

The e-Extension centre of Tamil Nadu Agricultural university is offering mobile based agro advisory services to farmers of Tamil Nadu. It is the prominent public mobile agro advisory system in Tamil Nadu and hence the present study has been focussed on advisory services of Tamil Nadu Agricultural University, Coimbatore. The study was carried out in the Annur and Kinathukadavu blocks of Coimbatore district of Tamil Nadu as these two blocks are the prominent blocks where more number of subscribers are available. About 1 per cent of the total

subscribers from the above two blocks were considered a sample for the study and accordingly the sample size has been fixed as 200 farmers (Annur – 107, Kinathukadavu – 93). The respondents from each block were selected by employing proportionate random sampling method. Ex post facto research design was used and the data were collected through personal interview using a structured interview schedule. The data thus collected were analysed using appropriate statistical tools.

OBSERVATIONS AND ANALYSIS

The result and discussion are presented as follows.

Constraints experienced by the farmers while availing mobile agro advisories :

The distribution of respondents according to their constraints over the mobile agro advisory services of farmers in Tamil Nadu is presented in Table 1.

Most of the respondents (84.50 %) stated that they have not received any information pertinent to local crops, followed by about seventy per cent (71.00 %) have expressed their concern over the non receipt of messages on agricultural loans and government subsidies. Further, about half of the respondents stated that there were no messages related with soil and water testing (52.50 %) and about the schedule of farmers trainings / meetings (48.00 %). Further, about one-third of the respondents (33.50 %) expressed their constraints that they could not interact with the service provider for further clarifications and about one-fourth of the respondents (26.50 %) stated that they could not open and read the SMS advisories from their mobiles, owing to their lack of skills in operating the smart phones.

Almost a similar percentage of the respondents reported that there were no messages related with dairy

Table 1 : Constraints of the respondents while availing mobile agro advisory services

| | | (n=200)* | |
|---------|---|----------|----------|
| Sr. No. | Constraints | Number | Per cent |
| 1. | Lack of information on soil and water testing | 105 | 52.50 |
| 2. | Lack of information on local crops | 169 | 84.50 |
| 3. | Non-relevancy of the messages | 47 | 23.50 |
| 4. | Service provider not adopting a proper time schedule of sending SMS advisories. | 36 | 18.00 |
| 5. | No interaction between farmers and service providers | 67 | 33.50 |
| 6. | Lack of skills to open and read the SMS advisories in smart phones | 53 | 26.50 |
| 7. | Non-compatibility of local language with the farmers' handsets | 18 | 9.00 |
| 8. | Lack of information about schedule of farmers trainings/meetings | 96 | 48.00 |
| 9. | Lack of information on agricultural loan and government subsidies | 142 | 71.00 |
| 10. | There is no dairy related information | 48 | 24.00 |

* Multiple response

activities (24.00 %) and non relevancy of the messages to their crop programmes (23.50 %). The service provider has not adhered a proper schedule of time to send the messages to the recipients. This has been stated as a prime constraint by about one-fifth of the respondents (18.00 %).

The service provider compose and send message advisories in Tamil. Even though most of the mobile phones now-a-days having the facility to download and install the required Tamil font, farmers may not aware it and may not be having skills to install the required Tamil font in their handsets. Moreover few mobile phones imported from china are not having facility to install the required font. This could be the reasons that about one-tenth of the respondents (9.00 %) expressed this issue as their constraints.

These findings are in conformity with the findings of Jayanthi and Asokhan (2016) who also reported that the major constraint of the farmers were lack of information on local crops, non relevancy of the messages and lack of interaction between farmers and service providers.

Suggestions of the farmers to improve the mobile agro advisory services :

There were twelve important suggestions considered for the study and presented in Table 2.

Most of the farmers (79.00 %) suggested to send the messages in local languages. Irrespective of the make of the mobiles, majority of the respondents felt that they

were not having expertise to download and install Tamil font. A vast majority of the respondents (65.50 %) suggested to increase the frequency of the SMS advisories. They also suggested repetition of the same messages. Most of the time, the farmers were unaware of the receipt the message in their mobiles. The failure of mobile network in the locality also contributed to the non delivery of SMS services. Owing to these issues, farmer could have given these suggestions.

Little less than half of the respondents (46.50 %) suggested to include picture and voice message advisories. As they were literates and most of them were having smart phones they could have made this suggestion. About two-fifth of the respondents felt that messages related with animal husbandry (40.00 %) and agricultural inputs (39.00 %) are to be included in the regular advisory services. Little less than two-fifth of the respondents (37.50 %) suggested to make continuous assessment of farmers' information needs at village so as to develop appropriate need based delivery of information. They also strongly suggested it to be a continuous process, as the needs of farmers changes from season to season and even during the cropping stage also it differs.

Export oriented messages related with various agricultural products were suggested to be included by about one-third of the respondents (31.50 %). Further, thirty per cent of the respondents felt that the message accuracy should be maintained. Normally the service provider sends common messages suitable to the system

| Sr. No. | Suggestions | Number | Per cent |
|---------|--|--------|----------|
| 1. | Message should be in local language only | 158 | 79.00 |
| 2. | Service provider may include picture and voice messages/ advisories | 93 | 46.50 |
| 3. | Frequency of SMS should be increased | 131 | 65.50 |
| 4. | Export information of various products to be included | 63 | 31.50 |
| 5. | More messages on inputs are required to be included | 78 | 39.00 |
| 6. | Messages on animal husbandry related information are to be provided | 80 | 40.00 |
| 7. | Messages on seed varieties and related information to be provided | 59 | 29.50 |
| 8. | Messages on value addition to be provided | 34 | 17.00 |
| 9. | Messages on organic cultivation to be included | 37 | 18.50 |
| 10. | Messages on farm machinery to be included | 82 | 41.00 |
| 11. | Mulberry production and marketing information are required to be included | 37 | 18.50 |
| 12. | Appropriate suggestions regarding different apps related with agriculture | 16 | 8.00 |
| 13. | The SMS should be able to meet the varied and increasing demands of farmers. | 55 | 27.50 |
| 14. | Message accuracy to be maintained | 60 | 30.00 |
| 15. | Messages should be timely | 52 | 26.00 |
| 16. | Continuous farmers' information need assessment should be done at village level. | 75 | 37.50 |

* Multiple response

and hence, it could not satisfy individual farmer's need and hence farmers could have made this suggestion. Continuous information need assessment at village level would help in providing accurate information to farmers.

About thirty percentages of the respondents (29.50 %) preferred to include the messages on seed varieties and related information. About one-fourth of the respondents (26.00 %) suggested to ensure timely delivery of messages. They suggested this point so as to take quicker decisions during crop stages and marketing of the produce. Network failure and signal failure are also the contributing factors for the delayed delivery of the messages. Almost a similar percentage of the respondents (27.50 %) felt that the SMS should be able to meet the varied and increasing demands of the farmers. Now we are living in the world of technological revolution. In the field of agriculture also lot of need based modern technologies are being generated and brought to farmers' use also. Creating proper awareness on such technologies and market based information could help farmers.

Almost a similar percentage of the respondents required to include messages related to mulberry cultivation (18.50 %), messages on farm machinery (18.50 %) and value addition (17.00 %). It is also interesting to note that a little percentage of the respondents (8.00 %) requested to send periodic advisories on the appropriate agricultural apps suited to their system. As the respondents were well educated, most of them were owning smart phones and a few had the access to internet facilities, they could have made this suggestion.

Conclusion :

Mobile agro advisory service is a key component of agricultural production and productivity improvement. Besides, farmers are realising some constraints while availing mobile agro advisory services from service providers. Constraints are opportunities to realise the weakness of service so as to improve the quality of messages to farmers and to avoid the crop losses to farmers.

A perusal of above findings showed that most of the farmers did not receive messages pertaining to their local crops. The TNAU, a major prime public SMS

service provider operating from Coimbatore, sends farmers' need specific SMS. Every effort is being taken by the service provider to provide accurate information specific to the farming system. But each and every farmer has his own needs as prime needs and because of this tendency they have expressed this as a major constraint. Most of the farmers in the study area were found cultivating different commercial crops, vegetable crops, food and horticultural crops. Hence, they have the tendency to avail agricultural loans and looking for subsidy from government agencies and hence about three-fourth of the respondents have expressed the non provision of messages on agricultural loans and subsidies as their major constraints. Necessary representations should be made to the service providers to include messages related with agricultural loan related information and government subsidies. Further, majority of the respondents stated that they have not received any message related with soil and water testing and dairy activities. Proper representation to be made to the service provider to consider this fact and it will help the service provider for the improving quality of services with wider popularity.

Authors' affiliations :

D. PRABHA Department of Agricultural Extension, Tamil Nadu Agricultural University, COIMBATORE (T.N.) INDIA
Email : mahaprabha014@gmail.com

REFERENCES

- Jayanthi, M.** and Asokhan, M. (2016). Constraints Faced by m-Kisan Users. *J. Extn. Edu.*, **28** (1) : 5622- 5624.
- Munyua, H.** (2007). ICTs and small-scale agriculture in Africa: a scoping study. Final Report. International Development Research Centre (IDRC), Ottawa.

WEBLIOGRAPHY

- Bhavnani, A.,** Chiu, R.W.W., Janakiram, S. and Silarszky, P. (2008). The Role of Mobile Phones in Sustainable Rural Poverty Reduction. Report, World Bank Report – ICT Policy Division, Global Information and Communications Department. The World Bank, Washington, DC, June 2008. In: http://siteresources.worldbank.org/EXT/INFORMATIONANDCOMMUNICATIONANDTECHNOLOGIES/Resources/The_Role_of_Mobile_Phones_in_Sustainable_Rural_Poverty_Reduction_June_2008.pdf.

12th
Year
★★★★★ of Excellence ★★★★★